

CLAIMS

1. A continuous emulsification process for process cheese type in which a series is continuously conducted, which comprises a heating process for agitating and emulsifying process cheese type at any agitation intensity using an agitation device provided in a vessel while the process cheese type is heated in the vessel applied with certain back pressure, a holding process for holding the heated process cheese type at a fixed time while the heated process cheese is flowed into a pipe, and a cooling process for cooling the held process cheese type,

wherein a transducer of an oscillating viscometer, is immersed in the process cheese type in the holding process or after the cooling process such that the transducer is not directly contacted with the process cheese type; and

wherein agitation intensity of the agitation device and/or back pressure applied to the vessel in the heating process is adjusted such that a detected value of the immersed transducer becomes near a target value which is set in advance, and thereby, production conditions are controlled automatically and the process cheese type is emulsified such that the viscosity of the process cheese in the holding process or after cooling process becomes near a target viscosity.

2. A continuous emulsification process according to claim 1, wherein when the transducer of the oscillating viscometer is immersed in process cheese type, the transducer is coated with a coating material in advance so as not to contact directly the process cheese type.

3. A continuous production method for process cheese type in which process cheese

type ingredients are kneaded, the kneaded process cheese type ingredients are transferred to a vessel applied with certain back pressure, and process cheese type is agitated and emulsified with any agitation intensity using an agitation device provided to the vessel while heating in the vessel, the heated process cheese type is held by flowing in a pipe at a certain period, the held process cheese type is cooled, and the cooled process cheese type is molded and filled and a process cheese type product is produced,

wherein a transducer of an oscillating viscometer is immersed in the process cheese type during holding or after cooling such that the transducer is not directly contacted with the process cheese type; and

wherein agitation intensity of the agitation device and/or back pressure applied to the vessel during heating is adjusted such that a detected value of the immersed transducer becomes near a set point which is set in advance, and thereby production conditions are controlled automatically so that the viscosity of process cheese type during holding or after cooling becomes near a target viscosity.

4. A continuous production method according to claim 3, wherein when the transducer of the oscillating viscometer is immersed in the process cheese type, the transducer is coated with a coating material in advance so as not to contact directly the process cheese type.

5. A continuous emulsification equipment for process cheese type comprising a heating equipment comprising a heating device for heating process cheese type and an agitation device for agitating the process cheese type at any agitation intensity, a holding pipe one end of which is connected to an outlet of the heating equipment and a back

pressure regulating valve is provided, a cooling device for cooling the process cheese type which is connected to the end of the holding pipe, and a carrying out pipe for carrying the process cheese type which is already emulsified, one end of which is connected to an outlet of the cooling device,

wherein an oscillating viscometer is provided to the holding pipe or the carrying out pipe,

wherein a transducer of the oscillating viscometer is immersed in the process cheese type flowing in the holding pipe or the carrying out pipe such that the transducer is not directly contacted with the process cheese type; and

wherein an output line showing detected values by the immersed transducer is connected with a display device, a recording device, and/or a printing device.

6. A continuous emulsification equipment according to claim 5, wherein the continuous emulsification equipment further comprises a control equipment for controlling automatically agitation intensity of the agitation device and/or opening of the back pressure regulating valve such that the detected values of the transducer becomes near a target value which is set in advance.

7. A continuous emulsification equipment according to one of claims 5 and 6, wherein the transducer of the oscillating viscometer is coated with a coating material.

8. A continuous emulsification equipment according to claim 7, wherein the coating material is made of fluorocarbon resin.

9. A continuous production equipment for process cheese type comprising a kneader for kneading process cheese type ingredients, the continuous emulsification equipment according to one of claims 5 to 8, and a molding and filling equipment for molding and filling the process cheese type which is sent through the carrying out pipe of the continuous emulsification equipment, and thereby a process cheese type product is produced.